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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,708	01/22/2004	Takayuki Nishimura	6453P033	7652

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EXAMINER

CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/763,708	Applicant(s) NISHIMURA ET AL.	
	Examiner Antonio A. Caschera	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6, 8, 12, 14, 15, 17, 19, 21, 25, 27, 29 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 25 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6, 8, 14, 15, 17, 19, 21, 27, 29 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the pending application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In reference to claims 31 and 32, claims 31 and 32 recite the limitation of rounding up or down when a certain situation is tested against the values 5 and 6 however it is unclear what this situation is. Claims 31 and 32 are indefinite in that they fail to particularly point out what value/expression/variable etc is compared to the values of 5 and 6 in order to decide on which rounding (up or down) to perform. Note, it is not clear as to what value(s) is/are compared to the values of 5 and 6 which in turn decides rounding up or down. Such an item missing from the claim language is vital in fully understanding the comparison and rounding operations of claims 31 and 32.

Claim Rejections - 35 USC § 103

Art Unit: 2628

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 6, 8, 14, 15, 17, 19, 21, 27, 29, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (U.S. Patent 6,778,187 B1) in view of Meyers et al. (U.S. Patent 6,486,889 B1).

In reference to claims 1, 14, 33 and 34, Yi discloses devices and methods for compressing color pixel data, storing it in memory, retrieving the data and uncompressing the compressed color pixel data from memory (see column 2, lines 11-18 and 25-32). Yi discloses performing the uncompressing upon already reduced bit length data, in particular, 8-bit red color component reduced to 5-bits, 8-bit green color component reduced to 5-bits and 8-bit blue color component reduced to 4-bits (see column 2, lines 63-67). Yi also discloses performing such compressing and uncompressing of color data using left and right shifting operations upon the bit data (see column 2, lines 11-13 and 27-28), which the Office interprets functionally equivalent to the “integer operation” of the claims, as the “integer” element being the number of bit places to shift the data by. Further note, the Office interprets the first unit system having the lower resolution level equivalent to the compressed form of the RGB data in Yi and the second unit system having the higher resolution level equivalent to the uncompressed form of RGB data in Yi. Also, the “first and second unit systems” of Applicant’s claims are seen functionally equivalent to the RGB14 (R=5 bits, G=5 bits, B=4 bits) and RGB24 (R=8 bits, G= 8 bits, B=8 bits) respectively. Further in reference to claims 33 and 34, since Yi also discloses the device

Art Unit: 2628

performing the above color data transformations as a microprocessor (see column 4, lines 34-38) and the device comprising RAM and DRAM elements (see column 4, lines 42-47), the Office interprets Yi to inherently disclose an executable program/code and medium for storing the program/code. Although Yi discloses first and second unit systems being of different format (RGB14 and RGB24, see above), Yi does not explicitly disclose using two separate color spaces to define the first and second unit systems. Meyers et al discloses methods and apparatus for color space transforming RGB video into Lab, Ycbcr and/or Srgb color spaces (see column 1, lines 8-9 and 33-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the color space transformation techniques together with the compression/decompression techniques of Yi in order to create a more flexible invention by allowing it to handle image information that had not been initially formatted to be compatible with other devices (see column 1, lines 44-48 of Meyers et al.) (see *Response to Arguments* below).

In reference to claims 2, 4, 6, 8, 15, 17, 19 and 21, Yi and Meyers et al. disclose all of the claim limitations as applied to claims 1 and 14 respectively above. Meyers et al discloses methods and apparatus for color space transforming RGB video into Lab, Ycbcr and/or Srgb color spaces (see column 1, lines 8-9 and 33-42). Note, the RGB video of Meyers et al. is seen as an analog signal since Meyers et al. discloses possible sources of the RGB video to be CRT monitors and televisions (see column 1, lines 11-14). Further, the “third data” of Applicant’s claims would be the combined data formed by the union of techniques described by Yi and Meyers et al., specifically, the color transformed RGB14 data which would be color transformed into Lab, Ycbcr and/or Srgb color spaces.

In reference to claim 27, Yi and Meyers et al. disclose all of the claim limitations as applied to claim 1 above in addition, since Yi discloses bit shifting (see above) to compress and decompress color data, the Office interprets that Yi inherently discloses conducting reversible conversion of data using powers of 2.

In reference to claim 29, Yi and Meyers et al. disclose all of the claim limitations as applied to claim 27 above. Yi discloses performing compression and uncompression operations upon color data using left and right shifting operations upon the bit data (see column 2, lines 11-13 and 27-28).

Allowable Subject Matter

4. Claims 12 and 25 are allowed.

The following is an examiner's statement of reasons for allowance:\

In reference to claims 12 and 25, the prior art of record (Yi (U.S. Patent 6,778,187 B1) and Meyers et al. (U.S. Patent 6,486,889 B1)) does not explicitly disclose implementing the first unit system as a "BNU" unit system converting to a 1/100mm second unit system, in combination with the further limitations of claims 12 and 25 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

5. Note, the cancellation of claims 3, 5, 7, 9-11, 13, 16, 18, 20, 22-24, 26, 28 and 30 is noted.

6. Further note, certain limitations of independent claims found within the preamble (“defined by a brightness and a color difference”) will not be given patentable weight since the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

7. Applicant's arguments filed 02/02/06 have been fully considered but they are not persuasive.

In reference to claims 1, 2, 4, 6, 8, 14, 15, 17, 19, 21, 27, 29, 33 and 34, Applicant argues that the Yi reference does not disclose that the reversible data conversion is performed via an integer operation (see 3rd paragraph, page 18 of Applicant's Remarks). Applicant further requests Examiner to provide support for the interpretation that the bit shifting of Yi is functionally equivalent to integer operation of Applicant's claims (see 3rd paragraph, page 18 of Applicant's Remarks). The Office interprets the bit shifting operation of Yi functionally equivalent to performing a multiplication or division (depending upon in which direction, left or right, the shift is performed) by a multiple of 2. Further, the limitation of “integer operation” is a very broad term and the Office believes such a term to equal performing any kind of operation (logical/arithmetic/bitwise etc.) using integers. Therefore since such shifting is interpreted as

Art Unit: 2628

performing arithmetic operations (i.e. multiplication or division by the number 2) the Office interprets such shifting functionally equivalent to the broad term of an “integer operation.” Further, the Office provides support for the above interpretation with reference to a programming guide to the TI-83 calculator wherein the author of the guide provides explanations into “Bit Shifting” (see “DAY 9. Bit Shifting” of Learn TI-83 Assembly In 28 Days, McLaughlin, <http://nwps.ws/~dragonfire/Asmin28/> © 2002). McLaughlin explicitly states that bit shifting is exactly like multiplying/dividing by 2 (see “DAY 9. Bit Shifting”, 1st paragraph). Therefore, in view of the above arguments and the supportive documentation cited above, the Office maintains it’s current rejection based upon Yi.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2628

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung, can be reached at (571) 272-7794.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

571-273-8300 (Central Fax)

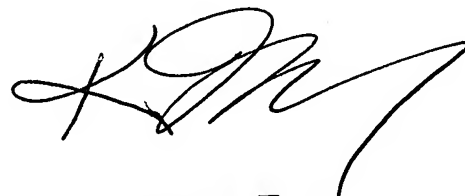
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (571) 272-2600.

aac

AM

4/1/06

PATENT EXAMINER



Kee M. Tung
Primary Examiner